

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002425**Date Inspected:** 18-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Ming Kai and See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** See Below**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector, M. Paul Stovall, was present at Zhenhua Port Machinery Company (ZPMC) on Changxing Island, Shanghai, China for the purpose of monitoring Quality Control (QC) functions during the fabrication of the Self Anchored Suspension (SAS) section of the San Francisco/Oakland Bay Bridge.

**Bay 2**

This QA Inspector observed ZPMC personnel cutting plate material that is for the Tower.

**Bay 3**

This QA Inspector observed ZPMC personnel fit and tack welded WT stiffeners on Side Plates (SP). These plates are SP745-001, SP608-001, and SP569-001. SP473-001 is a spliced plate welded using the Submerged Arc Weld (SAW) weld process. The Welding Procedure Specification (WPS) used for tack welding on this piece is WPS-B-T-2231-B-U2-F. ZPMC personnel, using the Flux Cored Arc Weld (FCAW) weld process, welded between the Shielded Metal Arc Weld (SMAW) tack welds. The QA Inspector verified the welding parameters as 293 amps and 30.1 volts. The ZPMC Certified welding Inspector is Zhu Zhong Hai.

The QA Inspector observed ZPMC personnel weld fillets at the rear gantry. This QA Inspector verified the welding parameters as 303 amperes (amps) and 30.6 volts. The work observed appeared to comply with the Welding Procedure Specification (WPS) used WPS-B-T-2132-3.

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## WELDING INSPECTION REPORT

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### Bay 4

This QA Inspector observed ZPMC welding personnel using the SAW process on CJP Tower Internal Diaphragm Plate splice SSD1-SA276-A/B-1A-(2A). The ZPMC welders are Jiang Jingteng, ID #046830, and Han Xiaofeng, ID 054487. This QA Inspector verified the welding parameters as 607 amps, 30.6 volts, and a travel speed of 495 milli-meters (mm) per minute. The work observed appeared to comply with the Welding Procedure Specification (WPS) used WPS-B-T-2221-B-U3c-S-1.

The QA Inspector observed ZPMC personnel grind fillet welds produced at the gantry welder and ZPMC welder Dai Lu, ID #048659, made minor weld repairs to these welds.

### Bay 7

This QA Inspector observed ZPMC personnel fit and tack weld plate stiffeners to FB003-042. The ZPMC welder is Wang Chang Fa, ID #058602. Other ZPMC personnel back gouged the root on FB010-007-023.

This QA Inspector This QA Inspector verified the welding parameters as 286 amperes and 30.6 volts. The work observed appeared to comply with the Welding Procedure Specification (WPS) used WPS-B-T-2132-3.

The QA Inspector observed ZPMC QC personnel Magnetic Particle Test (MT) areas of various Floor Beams that held Ultrasonic Test (UT) rejects and that had been backgouged, and ground. The list is as follows, there is one (1) each at FB015-012-026, FB011-007-026, -FB011-007-026, FB012-004-026, FB011-004-026, three (3) at FB009-005-026, two (2) at FB015-005-026, and FB014-003-026.

This QA Inspector observed ZPMC welder Hong Shuili, ID #044815 begin to weld repair the above mentioned ground UT rejects using the FCAW weld process. The QA Inspector observed that a Weld Repair Report, number B-WR209 for these repair welds is in use and that ZPMC QC has a copy.

### Bay 8

This QA Inspector observed ZPMC personnel weld fill passes on WD1-A2-2-1A (1B), 13-meter Exterior Diaphragm plate. Welding progressed until approximately 60% of the weld joint was completed then the welded plate was moved to the "B" side and ZPMC personnel began back gouging the root.

The QA Inspector observed ZPMC personnel grind the root of Exterior Diaphragm plate weld number WD1-A2-1-1B.

The QA Inspector observed ZPMC QC personnel to be checking the flatness of previously welded Diaphragm plates.

### Summary of Conversations:

The QA Inspector had no significant conversations.

### Comments

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## WELDING INSPECTION REPORT

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Stovall,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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